

Work Order ID 95923

January-21-13 9:52:22 AM

\*95923\*

Page 1

Item ID: D3065-1

Accept

\*N900040100\*

Setup

Start

\*NS1\*

Revision ID:

Item Name: Step Spacer

Stop

\*NS2\*

Start Date: 1/16/13 Start Qty: 60.00

\*60\*

Cust Item ID:

Required Date: 2/05/13 Req'd Qty: 60.00

\*60\*

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 13-01-23

Tooling:

Date:

Run Start

\*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop

\*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3065	Rev B								
100		0.00							
<b>*100*</b>	FLOW WATER JET								
Waterjet	Memo								
FLOW CNC Waterjet	I-Cut as per Dwg D3065 Dwg Rev: <u>B</u>								
	Prog Rev: <u>B</u>								
	2-Deburr as required								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
<b>*110*</b>									
QC	Memo								
Quality Control									

DAS  
05  
13-02-12

DAS  
05  
13-02-12

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____			<b>DISPOSITION</b>		<b>AGAINST DEPARTMENT/PROCESS</b>						
			Rework Scrap Use-as-is Work Order Update	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Skid-tube Machining Thermoforming Large Fab	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Crosstube Small Fab Finishing Composite	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Engineering Quality Other
Part No. _____		NCR No. _____									
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
<b>FAULT CATEGORY</b>											
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions						<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other	

Work Order ID 95923

January-21-13 9:52:22 AM

\*95923\*

Page 2

Item ID: D3065-1

Accept

\*N900040100\*

Setup

Start

\*NS1\*

Revision ID:

Item Name: Step Spacer

Stop

\*NS2\*

Start Date: 1/16/13

Start Qty: 60.00

\*60\*

Cust Item ID:

Required Date: 2/05/13

Req'd Qty: 60.00

\*60\*

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run

Start

\*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop

\*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

120

\*120\*

QC

Quality Control

QC8- Inspect parts - second check

0.00

0.00

13.2.4

14.5

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19

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21

22

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NCR: Yes / No

## **WORK ORDER NON-COMPLIANCE / UPDATE**

DQA: Date:

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

**Work Order ID** 95923**\*95923\***

Page 3

January-21-13 9:52:22 AM

**Item ID:** D3065-1

Accept

**\*N900040100\***

Setup

Start

**\*NS1\*****Revision ID:****Item Name:** Step Spacer

Stop

**\*NS2\*****Start Date:** 1/16/13    **Start Qty:** 60.00**\*60\*****Cust Item ID:****Required Date:** 2/05/13    **Req'd Qty:** 60.00**\*60\*****Customer:****Reference:****Approvals:** **Process Plan:****Date:****Tooling:****Date:**

Run

Start

**\*NR1\*****QC:****Date:****SPC (Y/N):****Date:**

Stop

**\*NR2\***

<b>Sequence ID/ Work Center ID</b>	<b>Operation Description</b>	<b>Set Up/ Run Hours</b>	<b>Tool ID</b>	<b>Tool #</b>	<b>Plan Code</b>	<b>Accept Qty</b>	<b>Reject Qty</b>	<b>Reject Number</b>	<b>Insp. Stamp</b>
150 <b>*150*</b> QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo	0.00  0.00 15 132-6				60			
160 <b>*160*</b> HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1  Memo	0.00  0.00				60	7/13-2-8		
170 <b>*170*</b> QC Quality Control	QC7-Inspect Chemical Conversion Coat  Memo	0.00  0.00 SMB 132-8				60			

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____			DISPOSITION		AGAINST DEPARTMENT/PROCESS					
			Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>			
			Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>			
			Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>			
			Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>				
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector	
Doc/Data										
Equip/Tooling										
Operator										
Material										
Setup										
Other										
Process										
Supplier										
Training										
Unapproved										
FAULT CATEGORY										
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions						
				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Other						
				<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled						

Work Order ID 95923

January-21-13 9:52:22 AM

\*95923\*

Page 4

Item ID: D3065-1

Accept

\*N900040100\*

Setup

Start

\*NS1\*

Revision ID:

Item Name: Step Spacer

Stop

\*NS2\*

Start Date: 1/16/13 Start Qty: 60.00

\*60\*

Cust Item ID:

Required Date: 2/05/13 Req'd Qty: 60.00

\*60\*

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

\*NR1\*

Stop

\*NR2\*

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

180

\*180\*

Packaging

Packaging

Identify as per dwg & Stock Location: G-A

0.00

0.00

Loc

SQ

13-2-11

190

\*190\*

QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

13/2/13 JJ

MLJ 13-02-12

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____		DISPOSITION			AGAINST DEPARTMENT/PROCESS																	
		Rework <input type="checkbox"/>	Scrap <input type="checkbox"/>	Use-as-is <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Machining <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Finishing <input type="checkbox"/>	Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/>	Quality <input type="checkbox"/>	Other <input type="checkbox"/>			
Part No. _____		NCR No. _____		Description of work order update or Non-conformance														Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Root Cause	Date	Step	Qty																			
Doc/Data																						
Equip/Tooling																						
Operator																						
Material																						
Setup																						
Other																						
Process																						
Supplier																						
Training																						
Unapproved																						
FAULT CATEGORY																						
Landing Gear				General																		
Bending		Bend		Grain		Ovalized		Pressure/Forced		Temperature/Cure		Weld		Wrong Stock Pulled		Other						
Centre Not Concentric to O/S		BOM/Route		Hardware		Over/Under tolerance																
Cracks		Broken/Damaged		Inspection Incomplete		Part Incorrect																
Crushed/Crimped.		Burrs		Instructions Incomplete/Unclear		Part Lost/Missing																
Cuffs		Contamination		Maintenance		Part Moved																
Heat Treat		Countersink		Mislabeled		Positioned Wrong																
Inspection Strip in Tube		Cut Too Short		Misread		Power Loss/Surge																
Ripples in Bend		Drill Holes		Offset																		
Torque Waves in Extrusion		Drawing		Out of Calibration																		
Turning Sequence		Finish		Out of Sequence																		
Wave/Twist in Tube		Folio		Outside Dimensions																		

# Picklist Print

January-21-13 9:52:21 AM

Page 1

Work Order ID: 95923

Parent Item: D3065-1

Start Date: 1/16/13

Required Date: 2/05/13

Parent Item Name: Step Spacer

Start Qty: 60.00

Required Qty: 60.00

Comments: IPP: C02.11.01 Incorporated D3066-1 IPPKJ/RF

IPP: D06.04.25 Water jet EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M2024T3S.040 2024-T3 .040 sheet		Purchased	No			100	sf	247.2023	0.1238	7.818948		W/ 13.02.02	

Location	Loc Qty	Loc Code
MAT022	247.2023252	
120605	65.8254832	
121197	64.996842	
122136	31.78	
123217	84.6	

NCR: Yes / No

# **WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: Date:

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS										
				Rework Scrap Use-as-is Work Order Update	Skid-tube Machining Thermoforming Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other								
Part No. _____  NCR No. _____																
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector							
Doc/Data																
Equip/Tooling																
Operator																
Material																
Setup																
Other																
Process																
Supplier																
Training																
Unapproved																
FAULT CATEGORY																
Landing Gear				General												
Bending	General			Bend	General			Grain	General			Ovalized	General			Pressure/Forced
Centre Not Concentric to O/S				BOM/Route				Hardware				Over/Under tolerance				Temperature/Cure
Cracks				Broken/Damaged				Inspection Incomplete				Part Incorrect				Weld
Crushed/Crimped.				Burrs				Instructions Incomplete/Unclear				Part Lost/Missing				Wrong Stock Pulled
Cuffs				Contamination				Maintenance				Part Moved				
Heat Treat				Countersink				Mislabeled				Positioned Wrong				
Inspection Strip in Tube				Cut Too Short				Misread				Power Loss/Surge				
Ripples in Bend				Drill Holes				Offset								
Torque Waves in Extrusion				Drawing				Out of Calibration								
Turning Sequence				Finish				Out of Sequence								
Wave/Twist in Tube				Folio				Outside Dimensions								

DART AEROSPACE LTD	Work Order:	95923
Description: Step Spacer	Part Number:	D3065-1
Inspection Dwg: D3065	Rev: B	Page 1 of 1

# FIRST ARTICLE INSPECTION CHECKLIST

## X First Article      Prototype

Measured by:	<u>M.M.</u>
Date:	13.02.02

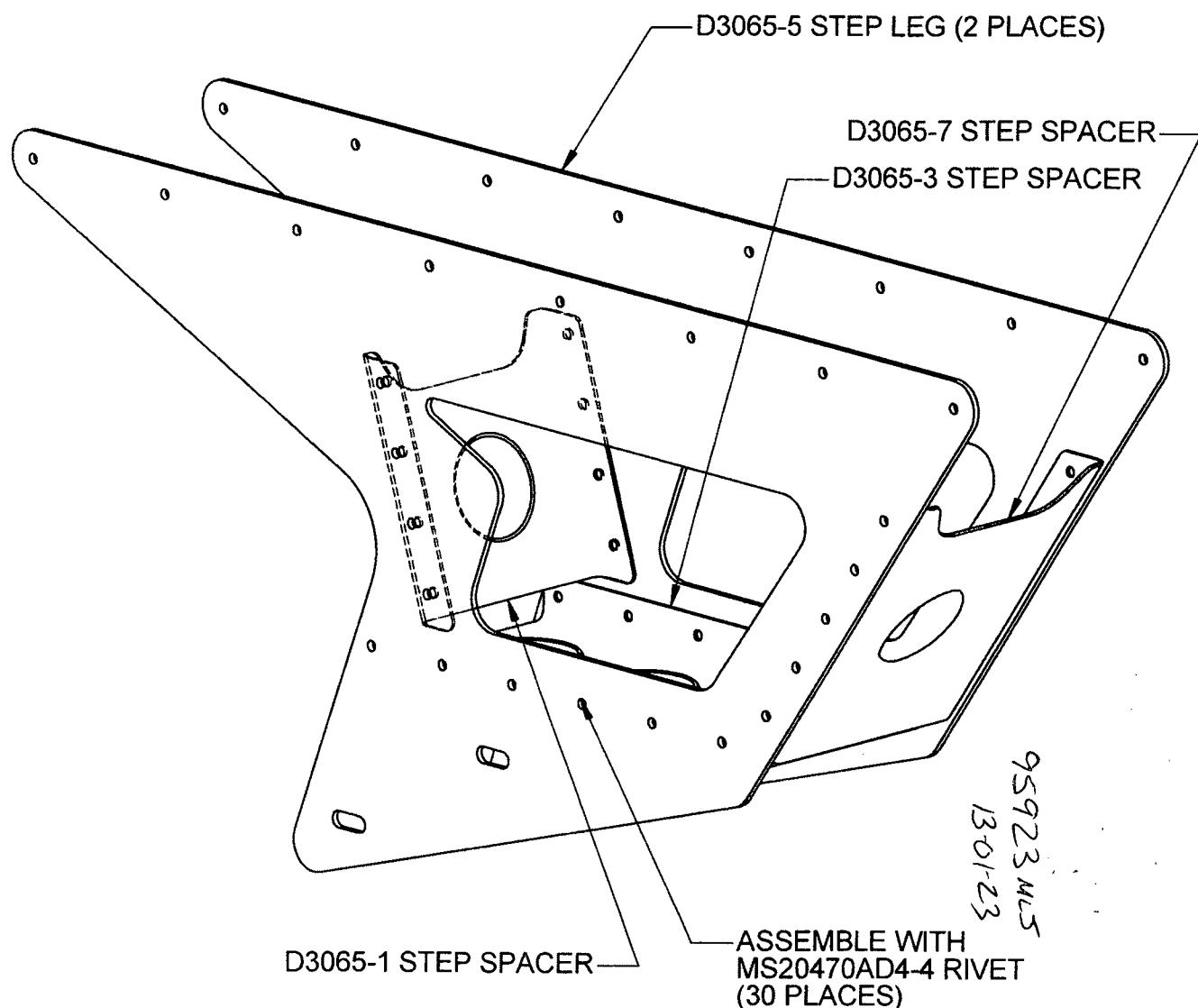
Audited by:	89
Date:	12-1-4

<b>Prototype Approval:</b>	
<b>Date:</b>	

Rev	Date	Change	Revised by	Approved
A	03.09.22	New Issue	KJ/RF	
B	06.06.23	Dwg Rev. changed	KJ/JLM	
C	07.02.07	Dimension 0.040 added	KJ/JLM	SJM

**DART**

DESIGN <i>CP</i>	DRAWN BY <i>CB</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>PH</i>	APPROVED <i>[Signature]</i>	DRAWING NO. <b>D3065</b>	REV. B SHEET 1 OF 5
DATE <b>06.05.23</b>		TITLE <b>STEP LEG ASSEMBLY</b>	SCALE 1:2
A	02.09.11	NEW ISSUE	
B	06.05.23	ADD 6061-T6 MATERIAL, ADD SLOTS TO D3065-5	

**RELEASED***06.06.20 [Signature]*

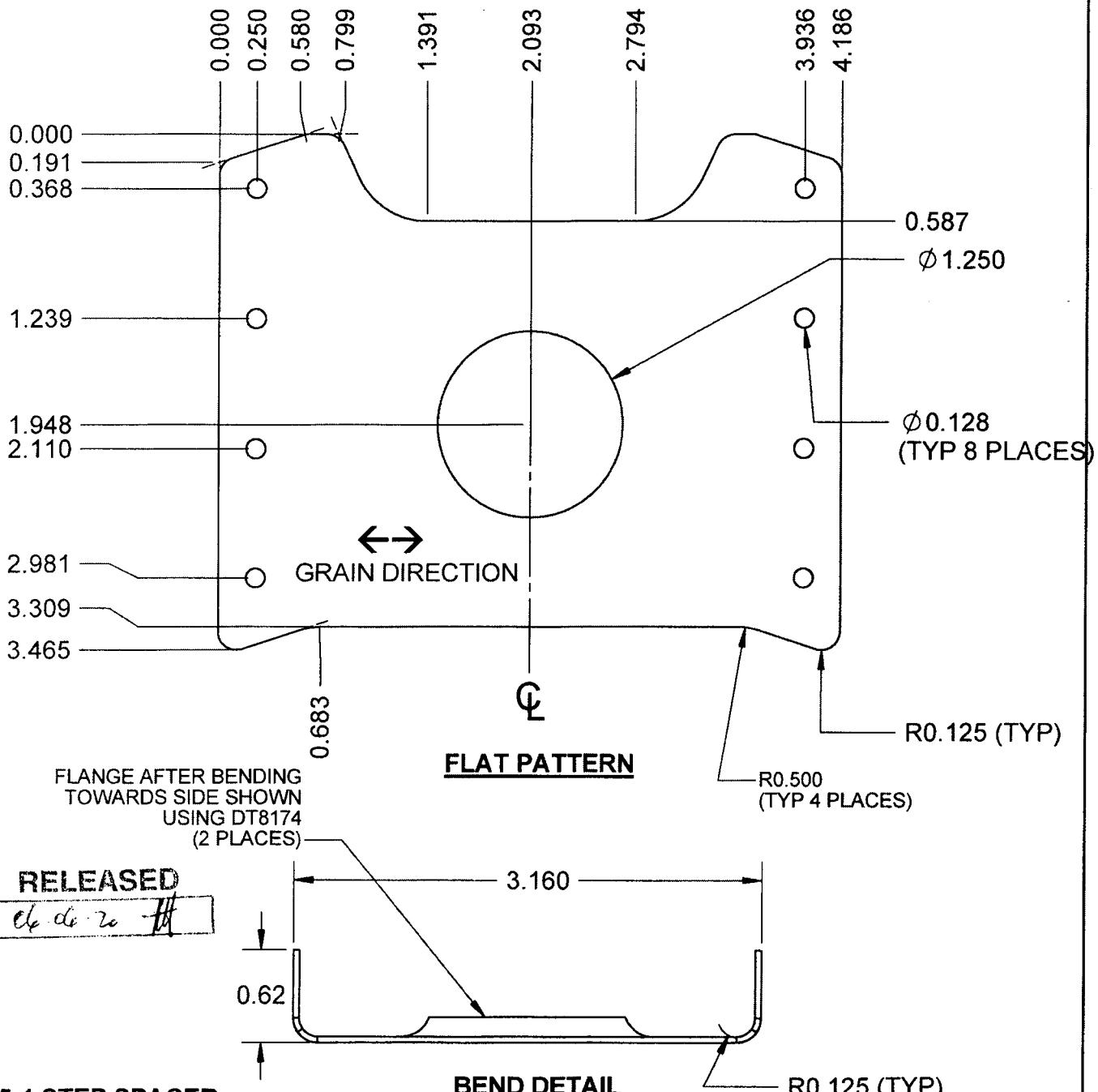
## **D3065-041 STEP LEG ASSEMBLY**

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**DART**

DESIGN <i>CP</i>	DRAWN BY <i>CB</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>PH</i>	APPROVED <i>M</i>	DRAWING NO. D3065	REV. B SHEET 2 OF 5
DATE 06.05.23	TITLE STEP LEG ASSEMBLY	SCALE 1:1	



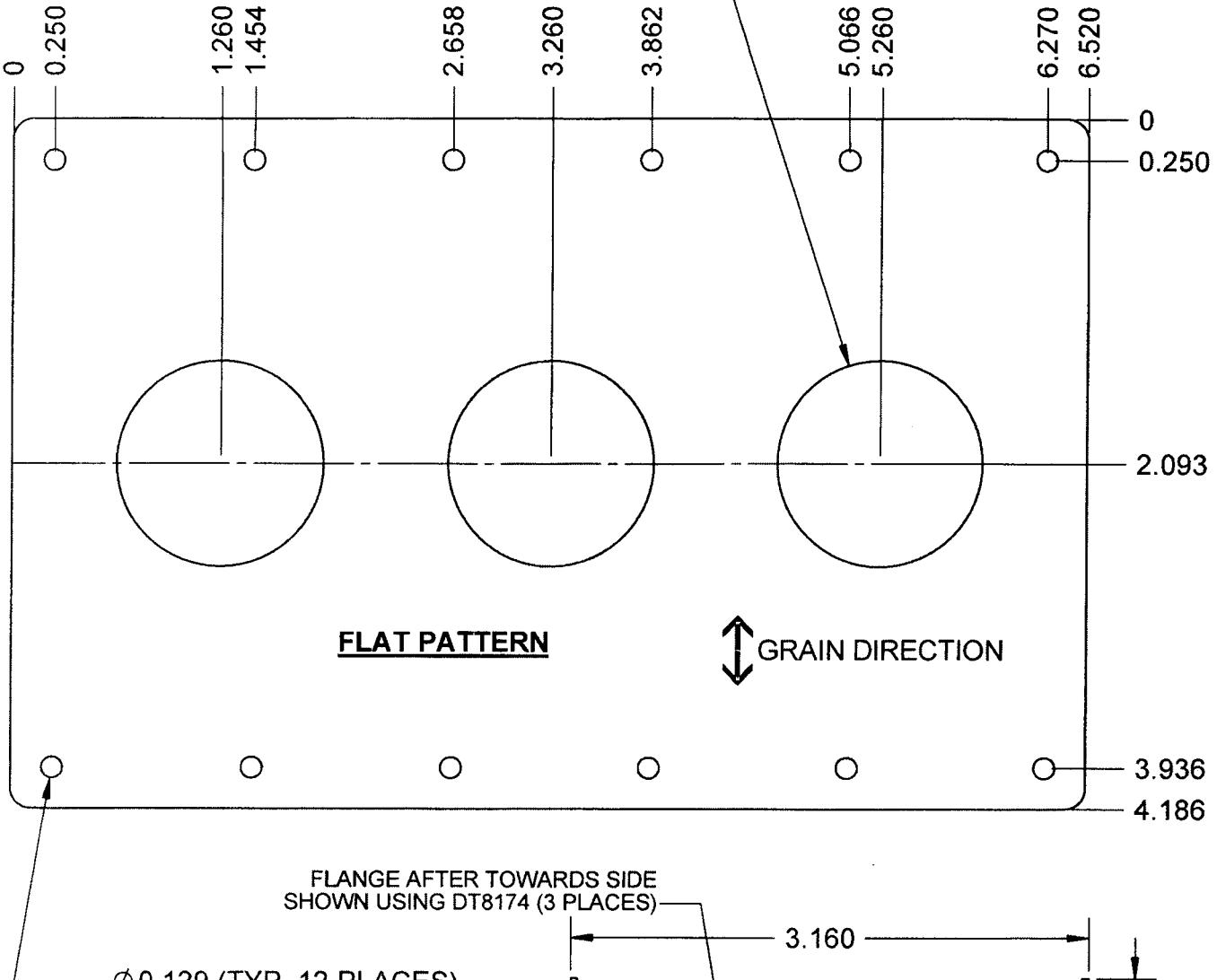
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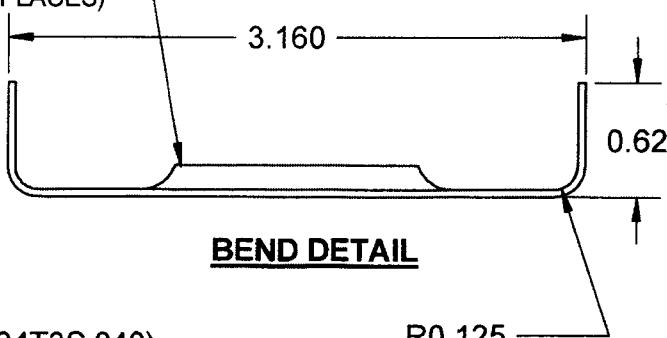
*S265b*

**DART**

DESIGN <i>CP</i>	DRAWN BY <i>CB</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
CHECKED <i>PH</i>	APPROVED <i>MM</i>	DRAWING NO. D3065	REV. B	SHEET 3 OF 5
DATE 06.05.23	TITLE STEP LEG ASSEMBLY	SCALE 1:1		

 $\phi 1.250$  (TYP, 3 PLACES)**D3065-3 STEP SPACER**

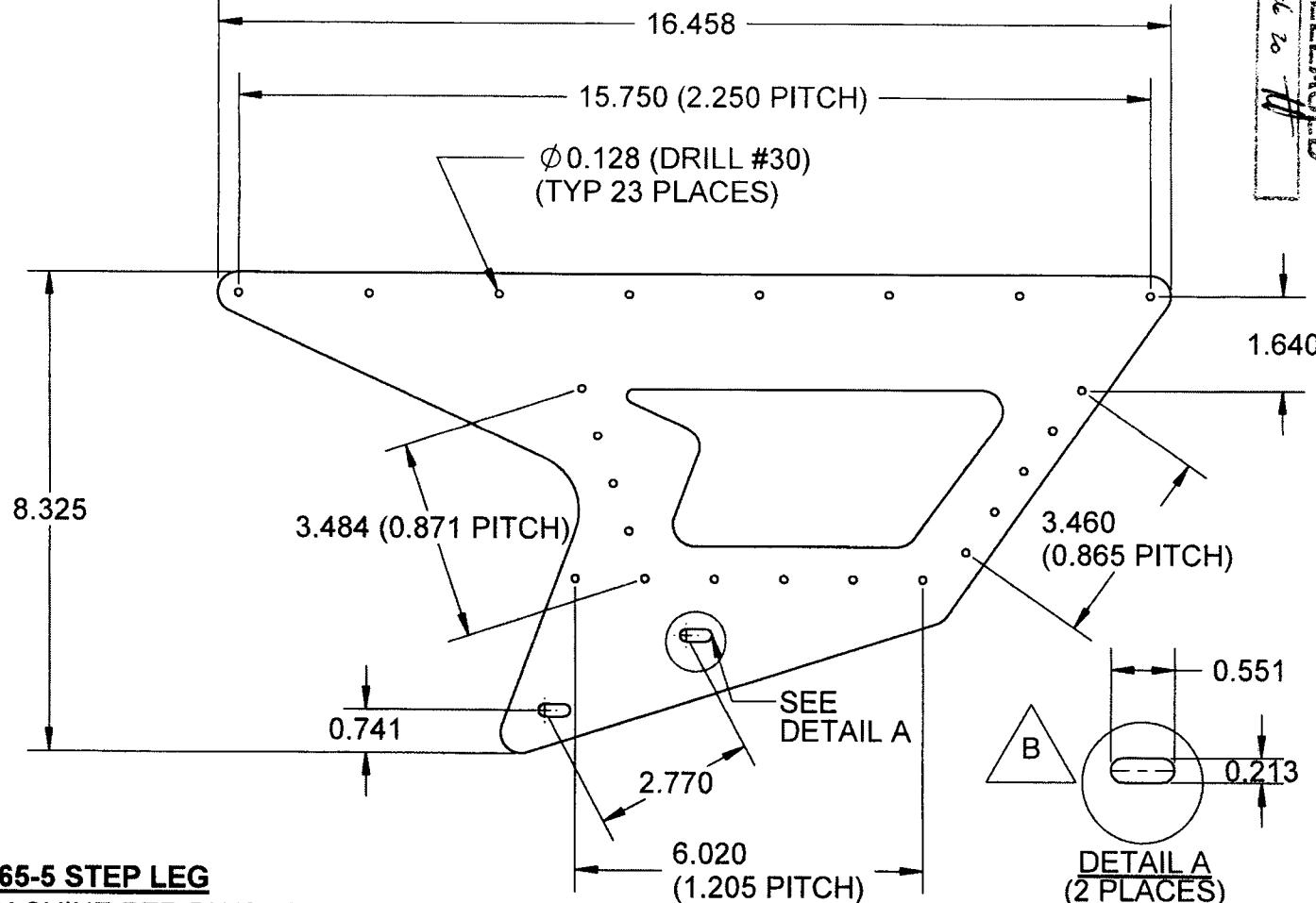
- 1) MATERIAL: 2024-T3 (QQ-A-250/4)  
0.040 THICK (REF DART SPEC. M2024T3S.040)
- 2) FINISH: ACID ETCH & ALODINE PER DART QSI 005 4.1
- 3) PART IS SYMMETRIC ABOUT CENTERLINE
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES

**BEND DETAIL**

95923

**DART**

DESIGN <i>10</i>	DRAWN BY <i>C.B.</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA
CHECKED <i>PH</i>	APPROVED <i>JK</i>	DRAWING NO. <b>D3065</b>
DATE <b>06.05.23</b>	TITLE <b>STEP LEG ASSEMBLY</b>	REV. B SHEET 4 OF 5 SCALE 1:3



RELEASED  
*W.C. 20*

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**D3065-5 STEP LEG**

- 1) MACHINE PER DWG FILE "D3065-5.SLDPRT"
- 2) MATERIAL: 6061-T6 (PER QQ-A-250/11 OR AMS 4025 OR AMS 4027) 0.080" THICK  
(REF DART SPEC M6061T6S.080)  
OR  
5052-H32 (PER QQ-A-250/8 OR AMS 4016) 0.080 THICK (REF DART SPEC. M5052H32S.080)
- 3) FINISH: ACID ETCH & ALODINE PER DART QSI 005 4.1
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES

**DART**

DESIGN <i>CP</i>	DRAWN BY <i>CB</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>PH</i>	APPROVED <i>MM</i>	DRAWING NO. D3065	REV. B SHEET 5 OF 5
DATE 06.05.23		TITLE STEP LEG ASSEMBLY	SCALE 1:1

